1. (Previously Presented) A three-dimensional photographing apparatus

a photographing unit configured to photograph an object from a plurality of viewpoints; and

a projecting unit configured to project a pattern on the object in photographing, the projecting unit including an optical system having a projection view angle and a projection view angle adjusting unit configured to set or adjust the projection view angle,

wherein the projection view angle of the optical system is set or adjusted by the projection view angle adjusting unit in accordance with an overlapped area which is formed by overlapping photographing spaces capable of photographing the object from the viewpoints, so as to project the pattern within a range where the photographing unit is able to photograph the object and on the overlapped area.

- 2. (Original) The apparatus according to claim 1, wherein the projection view angle is set so as to project the pattern on an area which is smaller than the overlapped area and which includes at least the object.
- 3. (Original) The apparatus according to claim 1, wherein the apparatus further comprises a three-dimensional reconfiguring unit configured to three-dimensionally reconfigure images of the object using an image picked up by the photographing unit, and

the photographing view angle falls within a range which is measured by the threedimensional reconfiguring unit and is set so as to project the pattern in an area which is included in the overlapped area.